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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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22879 7590 11/23/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER DICKERSON, CHAD S	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/633,076	<b>Applicant(s)</b> MELIN ET AL.	
	<b>Examiner</b> Chad Dickerson	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 9/14/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see page 6, filed 9/14/2007, with respect to the claim objections have been fully considered and are persuasive. The objections of the claims 8, 16 and 18 have been withdrawn.
2. Applicant's arguments, see page 6, filed 9/14/2007, with respect to 101 rejections have been fully considered and are persuasive. The 101 rejection of claim 18 has been withdrawn.
3. Applicant's arguments filed 9/14/2007 have been fully considered but they are not persuasive.

In the Amendment filed 9/14/2007, the Applicant traversed the rejection of claims by the references Yeung and Hanson. The Applicant stated many reasons why the prior art does not apply to Applicant's claimed invention. In the first argument, Applicant asserted that Yeung does not disclose the feature of "identifying markup language code associated with the configuration attributes supported by the printing device". The Examiner respectfully disagrees with this assertion.

When looking at column 3, lines 9-49, the Yeung reference discloses the makeup of the universal printer data structure. In this explanation, the specification of Yeung also discloses that additional features or capabilities may not always be included in the universal printer data structure definition file. This can be accounted for by adding new data elements with the universal printer description file. In doing this, the markup language associated with the additional features or capabilities, which are considered

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analogous to the configuration attributes, have to be identified in order to configure the universal printer data structure definition file to reflect the attributes of the printer. The elements that represent the capability or feature are in an XML structure. With the above explanation, the above feature is performed.

The Applicant also asserts that the Yeung reference does not teach or suggest "transmitting the markup language code that is associated with the configuration attributes supported by the printing device, from the printing device to the requesting device. The Examiner respectfully disagrees with this assertion.

Mentioned in column 5, lines 1-22 is the function of the printer driver (114) being able to access the universal printer data structure definition file and the universal printer description file of the printer through a communication line from the computer to the printer. The printer is able to transmit the universal printer data file to the computer in order to initialize the printer driver in the computer. When sending the universal printer data file to the computer for initialization, the structure of the file is in XML format, which is considered as markup language. The XML formatted document has the data elements of the capabilities of the printer represented in the universal printer data file so that the printer driver is able to communicate effectively to the printer since the initialization of the printer driver allows the computer to know the features of the printer desired to be used. The feature is clearly met since the universal print data file has the data elements with the capabilities of the printer sent to the computer and this file is compared to the printer specific data structure to make sure that the printer driver has the capabilities and features of the printer correct in order to fully utilize the printer (see

col. 10, lines 27-67 and col. 11, lines 1-24). Lastly, the Examiner must follow the MPEP when examining claims and the MPEP clearly states giving the claims the broadest reasonable interpretation while not reading the limitations of the specification into the claims. Therefore, in light of the above arguments, the claim feature is performed.

In regards to claim 2, the Applicant asserts that the feature of "excluding the markup language code that is associated with configuration attributes not supported by the printing device" is not performed. The Examiner respectfully disagrees with this assertion.

When referring to the Ulconstraints, the system prevents a user from selecting the option that the printer may not support. It is understood that the printer cannot have code for something it cannot do. If a user tries to input or perform something that the printer cannot achieve, the system does not allow because there is not a data element representing that feature since the printer does not support the feature (see col. 8, lines 52-62). Therefore, the above feature is performed.

In reference to claim 9, the Applicant asserts that the Yeung reference does not disclose the feature of "generating a device configuration interface to display the printing device's configuration attributes. The Examiner respectfully disagrees with this assertion.

First, the Examiner would like to draw attention to Applicant's own specification. On page 6 of Applicant's specification on lines 11-28, the Applicant gives various examples of what configuration attributes are in Applicant's invention. These attributes include settings, options, properties, and other configuration data that are supported by

the printing device. The Examiner points out in the Office Action that the reference of Yeung offers finishing options as well as other options to the user on the user interface to be displayed. The options shown throughout figure 4 can be offered to the user through the initialization of the printer specific data structure file and validating this file through the comparison of that file with the universal printer data structure definition file. These same options in the Yeung reference are in Applicant's specification listed as configuration attributes. The Examiner has broadly interpreted the claim and has used the only mention of the defining of the configuration attributes in Applicant's specification to assist in determining what the configuration attributes in the claim should be. The Examiner firmly believes that the correlation between the applicant's configuration attributes and the data elements in Yeung are similar and the display of the data elements on the user interface in Yeung reads on claim 9. Therefore, the above feature is performed.

The Applicant asserts that the reference of Yeung does not disclose, "an embedded application ... configured to make a run-time determination of which markup language code corresponds to supported configuration attributes of the printing device". The Examiner disagrees with this assertion.

In the system, when additional features are present in the printer, but these features are not accounted for in the universal printer data structure definition file, the additional functions can be accounted for by adding new data elements to the universal printer description file. In order for this to happen inside the printer, the printer has to have some type of program able to update the universal printer description file (see col.

3, lines 9-41). This is an example of some type of program that is able to update the file containing the features and capabilities of the universal printer description file when additional functions are not accounted for in the predetermined universal printer data structure defined. Therefore, the above feature is performed.

The Applicant asserts that Yeung fails to disclose the feature of "an embedded application ... is for making a run-time determination of which markup language code corresponds to the configuration attributes supported by the printing means". The Examiner respectfully disagrees with this assertion.

In the system, when additional features are present in the printer, but these features are not accounted for in the universal printer data structure definition file stored in the EEPROM (132) of the printer, the additional functions can be accounted for by adding new data elements to the universal printer description file. In order for this to happen inside the printer, the printer has to have some type of program able to update the universal printer description file (see col. 3, lines 9-41 and col. 5, lines 42-59). This is an example of some type of program that is able to update the file containing the features and capabilities of the universal printer description file when additional functions are not accounted for in the predetermined universal printer data structure defined. Therefore, the above feature is performed.

The Applicant asserts that the reference of Yeung fails to disclose the feature of "computer readable program code for transmitting the markup language code that is associated with the configuration attributes supported by the printing device". The Examiner respectfully disagrees with this assertion.

The Examiner would like to point out that it is conventional for any computer to have a computer readable medium to output instructions to a CPU so that the CPU will execute these instructions. The Yeung reference is not different from the conventional method of computing. When the printer allows the computer access to the memory of the EEPROM or the ROM by transmitting the information from the printer to the computer, an instruction has to be given to the CPU of the printer to perform the feature of transmitting the information in the printer to the computer. Although the claims of the Yeung reference are not compared to the specification of Applicant, it is understood that the operation of code to transmit information to another device in the system is expressed in claim 13 of Yeung (see col. 5, lines 23-59). Therefore, the above feature is performed.

In regards to the 103 rejections, the Applicant asserts that the references do not disclose the feature of claim 5 stating "parsing an XML tree ... and using the XML tree to create an HTML page that displays the printing device's configuration attributes". The Examiner respectfully disagrees with this assertion.

The reference of Yeung discloses a universal printer description file being used to be compared to the printer specific data structure file. Once the file is validated, it is analyzed, or parsed, to create a display showing the options the user may want to use in outputting a print job. The files parsed are made up of an XML structure that is in a tree-like structure (see Yeung col. 10, line 27 – col. 12, line 24). The Yeung reference is only deficient in creating the HTML page to be displayed and the Hanson reference teaches displaying documents that are in the HTML format, which performs the feature



of simply displaying a document in HTML (see Hansen col. 8, lines 12-21). With the two features combined, the above claim feature is performed.

Applicant also asserts that the feature of claim 7 stating, "receiving a request for a printing device's configuration ... from a network browser into the printing device's embedded web server" is not disclosed in the combined references. The Examiner disagrees with this assertion.

The Yeung reference discloses receiving a request for a printing device's configuration and this request is over the network (see col. 10, line 27-col. 12, line 24). However, Yeung is deficient in receiving the request from a network browser into the printing device's network server. The Hansen reference discloses a device with an embedded web server, which is realized through web server software. This includes having a web server in a device and a host computer communicating with the server through a browser on the host computer. With the combination of the web server software with the printer in Yeung, the feature of having an embedded web server is performed. Also, with the user using a browser to communicate with the server software, the combination of the user's browser with the feature of Yeung requesting the configuration of the universal printer data structure definition from the computer, the above feature of having the request from a browser is performed (see Hansen col. 3, line 62 – col. 4, line 24). Lastly, with the Applicant's statement regarding the origination of the HTML web page, the Examiner would like to ask the Applicant to point out the location of that feature in the claim language. With the combination of the two references, the above feature is performed.

In light of the above arguments, the rejection below is maintained.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6, 9-11, 13, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yeung '798 (US Pat No 6426798).

Re claim 1: Yeung '798 discloses a data structure for printer description file, comprising the steps of:

receiving a request for the printing device's configuration attributes at the printing device and the request is received from a requesting device (i.e. the request or query for the printing device's attributes occurs when a printer driver on the computer (40) accesses a printer-specific data structure on an external printer and compares this data structure to the universal printer data structure definition, which is stored on the requesting or querying computer. The printer-specific data structure or universal data structure, illustrated in figure 3, is a plurality of predetermined data elements used for storing various capabilities supported by one of a plurality of printers; see figs. 1-4 and 6; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24);

making a determination of the configuration attributes supported by the printing device (i.e. when the two data structures are compared, the validity of the printer-specific structure is based on how the data structures match in the capabilities of the printer being used. If the two structures do not match in having similar types of capabilities represented by the markup extensions, then an error is detected in the system and the printer-specific data structure is deemed invalid; see figs. 1-4 and 6; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24);

identifying markup language code associated with the configuration attributes supported by the printing device (i.e. in the system, the printing attributes are automatically mapped to an XML structure that arranges the printing attributes in a hierarchal order. When using the example of figure 6 to determine if a printer-specific data structure is valid, the attributes are compared to the attributes in the universal printer data structure definition. The comparison involves the attributes and the markup language associated with the attributes; see figs. 3-6; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24); and

transmitting the markup language code that is associated with the configuration attributes supported by the printing device, from the printing device to the requesting device (i.e. when the computer (40) used in the system accesses the printer-specific data structure through a communication line (106) to the printer (50), after it is discovered that the printer-specific data structure is valid, the data structure is sent or transmitted to the computer (40) for the printer driver to correctly communicate with the

printer (50) using the printer-specific data structure; see figs. 1-3 and 6; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 2: The teachings of Yeung '798 are disclosed above.

Yeung '798 discloses a method, wherein the step of identifying markup language code further comprises the step of excluding markup language code that is associated with configuration attributes not supported by the printing device (i.e. the system recognizes the user interface constraints. This defines the maximum allowance of a certain feature. It is believed that no markup language is in relation to the attribute past the threshold of certain interface constraints; see fig. 4; col. 8, lines 52-62).

Re claim 3: The teachings of Yeung '798 are disclosed above.

Yeung '798 discloses a method, wherein the step of identifying markup language code further comprises the step of identifying markup language code associated with groups of configuration attributes supported by the printing device (i.e. in the system, for every function or attribute that is performed by the printer, a markup language code is associated with the function or attribute. This is illustrated in figures 3 and 4. The printer driver identifies these functions in the system when the printer driver is trying to obtain the correct printer capabilities to communicate correctly to the printer with the printer-specific data structure. The data structure is comprised of XML, which is a markup language; see figs. 3 and 4; col. 5, lines 60-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 4: The teachings of Yeung '798 are disclosed above.

Yeung '798 discloses a method, wherein the step of identifying markup language code further comprises the step of identifying groups of configurations attributes, wherein each group of configurations is associated with a markup language document (i.e. the universal printer data structure definition (150) is defined in XML and is retained in a file referred to as a Document Type Description (DTD). The DTD is considered as a markup language document; see fig. 2 and 3; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 6: The teachings of Yeung '798 are disclosed above.

Yeung '798 discloses a method, wherein the step of identifying markup language code further comprises the step of identifying markup language code associated with an individual configuration attribute supported by the printing device (i.e. in the system, for every function or attribute that is performed by the printer, a markup language code is associated with the function or attribute. This is illustrated in figures 3 and 4. The printer driver identifies these functions in the system when the printer driver is trying to obtain the correct printer capabilities to communicate correctly to the printer with the printer-specific data structure. The data structure is comprised of XML, which is a markup language; see figs. 3 and 4; col. 5, lines 60-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 9: The teachings of Yeung '798 are disclosed above.

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Yeung '798 discloses a method, further comprising the step of generating a device configuration interface to display the printing device's configuration attributes by including markup language code that is associated with the configuration attributes supported by the printing device (i.e. the printing device's attributes are displayed on the user interface for the user to choose what desired settings the user would like to take place on a document. These settings are accompanied by the markup language that are transmitted to the printer driver, so that the printer driver can ensure correct communication with the printer using the same printer-specific data structure described in XML, but display in a format for the user to read and understand; see col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 10: The teachings of Yeung '798 are disclosed above.

Yeung '798 discloses a method, wherein the step of receiving a request for the printing device's configuration attributes further comprises the step of receiving a request for configuration attributes from a device driver for a printing device (i.e. the request or query for the printing device's attributes occurs when a printer driver on the computer (40) accesses a printer-specific data structure on an external printer and compares this data structure to the universal printer data structure definition, which is stored on the requesting or querying computer. The printer-specific data structure or universal data structure, illustrated in figure 3, is a plurality of predetermined data elements used for storing various capabilities supported by one of a plurality of printers; see figs. 1-4 and

6; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 11: Yeung '798 discloses a data structure for printer description file, comprising:

markup language code stored on the printing device (i.e. the markup language code is stored in the ROM (122) or EEPROM (132), in regards to the data elements that represent the capabilities of the printer. The markup language is structured so that the attributes in the system are associated with certain features; see col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67), the markup language code being configured to describe and update the printing device's configuration attributes (i.e. the markup language is used to describe the different functions and attributes of the printer. The XML used is structured in an arrangement that correlates certain features of the printer with XML code. When the determination is made whether the printer-specific data structure matches the universal printer data structure definition, the system checks to see if there are any additional features not accounted for by the universal printer data structure definition (UPDSD), so that these elements may be added to the UPDSD. This is considered as updating the data structure in order to create a better printer-specific data structure in the future; see fig. 2 and 6; col. 3, lines 9-41; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24);

an embedded application in communication with the printing device, wherein the embedded application is configured to make a run-time determination of which markup

language code corresponds to supported configuration attributes of the printing device (i.e. when the computer (40) accesses the printer (50) using the communication interface (106), the process of performing a determination of which markup language code corresponding with a supported configuration attribute of the printer is performed and is illustrated in figure 6. In the embodiment of the invention, the attribute of any printer has its own corresponding markup language already assigned. With this fact, the determination of markup language code for a supported attribute is clearly performed. This invention ensures that the right attributes for the printer are found, with their corresponding markup language, and sent to the computer (40) for the printer driver to interact with the printer in a correct manner, realizing the printer's supported attributes while using the markup language corresponding to the attribute. Although an embedded application is not specifically disclosed, the feature is performed by the EEPROM or the ROM, since these devices are both in communication with the printer and stores printer-related information in regards to the universal printer description file (140) and the universal printer data structure definition file (150). These two files determine the supported attributes of the printer and have the corresponding markup languages with the attributes. In the system, when additional features are present in the printer, but these features are not accounted for in the universal printer data structure definition file, the additional functions can be accounted for by adding new data elements to the universal printer description file. In order for this to happen inside the printer, the printer has to have some type of program able to update the universal printer description file (see col. 3, lines 9-41). This is an example of some type of



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program that is able to update the file containing the features and capabilities of the universal printer description file when additional functions are not accounted for in the predetermined universal printer data structure defined.; see figs. 2-6 and Appendix A on page 26; col. 3, lines 9-41; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24); and

a communication module associated with the printing device (i.e. the communication line (106) is considered as the communication module; see figs. 1 and 2; col. 10, lines 27-67), and the communication module is configured to receive requests for configuration attributes and transmit configuration attributes of the printing device (i.e. when the computer (40) tries to access the printer (40) by the communication line (106), it queries the printer's EEPROM or ROM in order to request from or query the printer's memory to compare the printer-specific data structure to the universal printer data structure definition. This example is analogous to the computer asking to see the universal printer data structure definition to compare it to the printer-specific data structure to see if it is valid; see fig. 6; col. 3, lines 9-41; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 13: The teachings of Yeung '798 are disclosed above.

Yeung '798 discloses a system, wherein the printing device supports printer control language (PCL) (i.e. the printer can support many languages such as PCL5c or PCL6 which are different variations of PCL; see col. 7, lines 7-21).

Re claim 15: The teachings of Yeung '798 are disclosed above.

Yeung '798 discloses a system, wherein the markup language code includes XML code (i.e. the markup language in this invention is XML; see appendix A on page 26; col. 3, lines 9-41; col. 5, lines 42-67; col. 6, lines 1-17).

Re claim 16: Yeung '798 discloses a data structure for printer description file, comprising:

a printing means for printing (i.e. the printer (40) in the system has a printer engine (131) to cause an output from the printer; see col. 5, lines 35-41);

a markup language code means for describing configuration attributes (i.e. the universal print data structure file (140) is used to describe the configuration attributes or the printer. This is utilized by the printer driver to configure itself to be able to print on the printer using the correct attribute options; see fig. 2-4 and 6; col. 5, lines 42-67; col. 6, lines 1-25; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24), wherein the markup language code means is stored on the printing means (i.e. the ROM (122) or EEPROM (132) stores the universal printer description file (140) and the universal printer data structure definition file (150) on the printer (40); see col. 5, lines 42-67; col. 6, lines 1-25);

an embedded application means stored in the printing means, wherein the embedded application means is for making a run-time determination of which markup language code corresponds to the configuration attributes supported by the printing means (i.e. when the computer (40) accesses the printer (50) using the communication

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interface (106), the process of performing a determination of which markup language code corresponding with a supported configuration attribute of the printer is performed and illustrated in figure 6. In the embodiment of the invention, the attribute of any printer has its own corresponding markup language already assigned. With the above detail, the determination of markup language code for a supported attribute is clearly performed. This invention ensures that the right attributes for the printer are found, with their corresponding markup language, and sent to the computer (40) for the printer driver to interact with the printer in a correct manner, realizing the printer's supported attributes while using the markup language corresponding to the attribute. Although an embedded application is not specifically disclosed, the feature is performed by the EEPROM or the ROM, since these devices are both in communication with the printer and stores printer-related information in regards to the universal printer description file (140) and the universal printer data structure definition file (150). These two files determine the supported attributes of the printer and have the corresponding markup languages with the attributes; see figs. 2-6 and Appendix A on page 26; col. 3, lines 9-41; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24); and

a communication module means in the printing means (i.e. the communication line (106) is considered as the communication module; see figs. 1 and 2; col. 10, lines 27-67), wherein the communication port means is for receiving requests for the configuration attributes and transmits configuration attributes supported by the device (i.e. when the computer (40) tries to access the printer (40) by the communication line

(106), it queries the printer's EEPROM or ROM in order to request from or query the printer's memory to compare the printer-specific data structure to the universal printer data structure definition. This example is analogous to the computer asking to see the universal printer data structure definition to compare it to the printer-specific data structure to see if it is valid; see fig. 6; col. 3, lines 9-41; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

Re claim 18: Yeung '798 discloses a data structure for printer description file, comprising:

a computer usable medium having computer readable program code embodied therein for dynamically controlling access to configuration attributes for a printing device (i.e. the EEPROM (132) has reprogrammable memory that stores information that may be provided to the computing equipment (40) to inform the computer of the operational parameters of the printer (40); see col. 5, lines 23-59), the computer readable program code means in the article of manufacture comprising:

computer readable program code for receiving a request for the printing device's configuration attributes (i.e. the request or query for the printing device's attributes occurs when a printer driver on the computer (40) accesses a printer-specific data structure on an external printer and compares this data structure to the universal printer data structure definition, which is stored on the requesting or querying computer. The printer-specific data structure or universal data structure, illustrated in figure 3, is a plurality of predetermined data elements used for storing various capabilities supported

by one of a plurality of printers; see figs. 1-4 and 6; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24);

computer readable program code for making a run-time determination of configuration attributes supported by the printing device (i.e. the universal printer data structure definition file (150) along with the universal printer description file (140) are both used to determine a printing device's supported attributes. Figure 6 is an illustration of determining what attributes are valid in the files, or supported, so that a printer driver can be configured to print on a certain printer (40); see figs. 1-4 and 6; col. 5, lines 42-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24);

computer readable program code for identifying markup language code associated with the configuration attributes supported by the printing device (i.e. in the system, the printing attributes are automatically mapped to an XML structure that arranges the printing attributes in a hierarchal order. When using the example of figure 6 to determine if a printer-specific data structure is valid, the attributes are compared to the attributes in the universal printer data structure definition. The comparison involves the attributes and the markup language associated with the attributes; see figs. 3-6; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24); and

computer readable program code for transmitting the markup language code that is associated with the configuration attributes supported by the printing device to the requesting device (i.e. when the computer (40) used in the system accesses the printer-specific data structure through a communication line (106) to the printer (50), after it is

discovered that the printer-specific data structure is valid, the data structure is sent or transmitted to the computer (40) for the printer driver to correctly communicate with the printer (50) using the printer-specific data structure; see figs. 1-3 and 6; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 7, 8, 12, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeung '798 in view of Hansen '014 (US Pat No. 7185014).

Re claim 5: The teachings of Yeung '798 are disclosed above.

Yeung '798 teaches a method, further comprising the steps of parsing an XML tree containing the printing device's configuration attributes (i.e. the DTD file created using the universal printer data structure definition forms a tree-like structure illustrated in figures 3 and 4. This structure is analyzed, or parsed, to find corresponding printing attributes for the printer-specific data structure used to configure the printer driver in the computer (40); see figs. 1-4 and 6; col. 5, lines 60-67; col. 6, lines 1-17; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24) and using the XML tree to create an page that displays the printing device's configuration attributes (i.e. the printing device's

attributes are displayed on the user interface for the user to choose what desired settings the user would like to take place on a document; see col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

However, Yeung '798 fails to teach using the XML tree to create an HTML page that displays the printing device's configuration attributes.

However, this is well known in the art as evidenced by Hansen '014. Hansen '014 discloses using the XML tree to create an HTML page that displays the printing device's configuration attributes (i.e. the reference discloses describing commands and documents in any computer language, such as html; see col. 8, lines 13-21).

Therefore, in view of Hansen '014, it would have been obvious to one of ordinary skill at the time the invention was made to create an HTML page that displays the printing device's configuration attributes in order to have documents or commands be described in the HTML format (as stated in Hansen '014 col. 8, lines 13-21).

Re claim 7: The teachings of Yeung '798 are disclosed above.

Yeung '798 teaches a method, wherein the step of receiving a request for the printing device's configuration attributes further comprises the step of receiving the request for the printing device's configuration attributes from a network browser into a printing device over a network (i.e. with the universal print data structure definition file or the universal print describing file being accessed over the internet or LAN, while the user may select desired printing options through a display on the computer 40), this all is analogous to receiving a request for the printing device's attributes from a network

browser into a printing device over a network; see fig. 6; col. 10, lines 27-67; col. 11, lines 1-24 and col. 12, lines 1-24).

However, Yeung '798 fails to teach receiving the request for the printing device's configuration attributes from a network browser into printing device's embedded web server.

However, this is well known in the art as evidenced by Hansen '014. Hansen '014 discloses receiving the request for the printing device's configuration attributes from a network browser into printing device's embedded web server (i.e. the actual server has web server software that can function as an embedded web server. This is used to communicate over an external network and it hosts a web page associated with parameters of another device (11). This web page is displayed on a host computer. The web server software is analogous to an embedded web server since the software is equivalent to a web server itself; see fig. 1; col. 3, lines 62-65 and col. 4, lines 1-24).

Therefore, in view of Hansen '014, it would have been obvious to one of ordinary skill at the time the invention was made to receive the request for the printing device's configuration attributes from a network browser into printing device's embedded web server in order to allow the web server software to communicate with other devices over the network (as stated in Hansen '014 col. 4, lines 1-24).

Re claim 8: The teachings of Yeung '798 in view of Hansen '014 are disclosed above. Yeung '798 discloses a method, further comprising the step of using a local area network or the World Wide Web of the Internet as the network (i.e. accessing the printer



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(40) can be performed through an internet connection or over a local or wide area network; see col. 11, lines 1 and 2).

Re claim 12: The teachings of Yeung '798 in view of Hansen '014 are disclosed above.

However, Yeung '798 fails to teach a system, wherein the communication module is an embedded web server.

However, this is well known in the art as evidenced by Hansen '014. Hansen '014 discloses the communication module is an embedded web server (i.e. in the system, web server software is used to communicate with other devices connected to the network. The web server software is analogous to an embedded web server since the software is equivalent to a web server itself; see fig. 1; col. 3, lines 62-65 and col. 4, lines 1-24).

Therefore, in view of Hansen '014, it would have been obvious to one of ordinary skill at the time the invention was made to the communication module is an embedded web server in order to allow the web server software to communicate with other devices over the network (as stated in Hansen '014 col. 4, lines 1-24).

Re claim 14: The teachings of Yeung '798 in view of Hansen '014 are disclosed above.

However, Yeung '798 fails to teach a system, wherein the markup language code includes HTML code.

However, this is well known in the art as evidenced by Hansen '014. Hansen '014 discloses a system, wherein the markup language code includes HTML code (i.e.

the reference discloses having documents and commands in the html format; see col. 8, lines 13-21).

Therefore, in view of Hansen '014, it would have been obvious to one of ordinary skill at the time the invention was made to a system, wherein the markup language code includes HTML code in order to have any computer language to be used, such as html (as stated in Hansen '014 col. 8, lines 13-21).

Re claim 17: The teachings of Yeung '798 in view of Hansen '014 are disclosed above.

However, Yeung '798 fails to teach a system, wherein the communication module means is an embedded web server.

However, this is well known in the art as evidenced by Hansen '014. Hansen '014 discloses a system, wherein the communication module means is an embedded web server (i.e. in the system, web server software is used to communicate with other devices connected to the network. The web server software is analogous to an embedded web server since the software is equivalent to a web server itself; see fig. 1; col. 3, lines 62-65 and col. 4, lines 1-24).

Therefore, in view of Hansen '014, it would have been obvious to one of ordinary skill at the time the invention was made to have a system, wherein the communication module means is an embedded web server in order to allow the web server software to communicate with other devices over the network (as stated in Hansen '014 col. 4, lines 1-24).

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Moore '831 discloses driverless printing that discloses the features of having a computer request the attributes of a printer, the printer performing a determination of the attributes present on the apparatus and sending the attributes over to the computer in order to configure the printer driver on the computer for correctly printing on the printer.

10. Parry (US Pub No 2003/0078963) discloses a printer with an embedded network server that performs the function of having a sending interface used to display the options and settings that are available on the sender printer. These options and settings are sent to the sender interface, which can be a remote computer.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

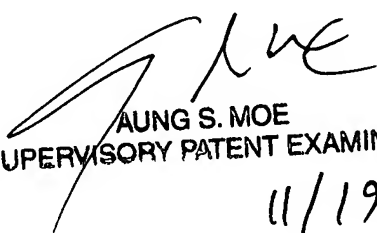
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Dickerson whose telephone number is (571)-270-1351. The examiner can normally be reached on Mon. thru Thur. 9:00-6:30 Fri. 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Aung Moe can be reached on (571)- 272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CD/   
Chad Dickerson  
November 15, 2007

  
AUNG S. MOE  
SUPERVISORY PATENT EXAMINER

11/19/07